First Lessons by Euclid's *Elements*

This first lesson is going to cover the unit thing, our tools and what they are for, and the whole foundation of the recursion of that unit.

Geometry is a written Grammar; therefore, we need paper, real or virtual, pencil, real or virtual, straightedge, real or virtual, and compass, real or virtual.

The pen and paper are available, potential, memory, they store the memory of what we do with our own hand. What we produce with our tools is our own memory, a memory of experiences with our tools. We learn by experience commensurate with our own intelligence, therefore, as Geometry is a grammar which means the art of producing binary recursion, it also means the art of binary recursion taught to us by our very own hand to the limit of our intelligence. We can learn a great deal from the *Elements* of Euclid how to do our biologically defined job.

Everything we are "given" in the *Elements*, is "taken" from our own storehouse of memory. "given" does not mean something someone gave us, but that it is a given requirement for the proposition at hand.

Therefore, with a straightedge and your own hand, draw a line, like so:

Anytime a proposition mentions a given, it means that you must take it from memory as a given.

A compass is an adjustable triangle by which we construct any circle or any part of a circle. This means that the compass is not only the product of binary recursion, but that it also is used to denote every possible recursion of our given line that we may require. In short, within the compass is potential memory, and it is our job to extract from that potential memory, memory already used by the Universe, itself, to augment our memory with. So, we are given not only the first thing, but all things by our two tools. There is nothing wanting, save what we can recall, or abstract from them. What Geometry wants from us, is our intelligence to do our biologically defined job.

To understand our line, we have to recall our own past experience with everything we have ever known is that:

13. A **boundary** is that which is an extremity of anything.

14. A **figure** is that which is contained by any boundary or boundaries.

That is everything is defined in terms of these two facts about it, i.e., that every-thing is a relative contained by correlatives. In other words, that every possible thing in the Universe is a binary construct consisting of these two parts, which in Common Grammar we call a noun and a verb. It can also be called a standard of behavior as standard is to the correlatives as behavior is to the relative, such as our very own definition as Mind informs us that we must acquire.

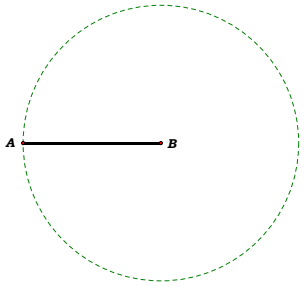
And that in the particular, for Geometry, and for naming our unit, we call the boundary a point, and we call the figure linear.

3. The extremities of a line are **points**.

1. A **point** cannot be divided, no more than a divisor can be divided. Nor does a point, qua point, have position, it is not a thing which has anything at all. Now there have been many so-called intellectuals who claim something on the order that a chef can wave his knife in the air an infinite number of times to create a dinner with, but that is just Hollywood and the legends of Harry Potter are probably older than the campfire and commensurate with the "Wishes it were so's." We assert correlatives, they are not things, nor have they anything, a container, a division, cannot possibly contain, or divide, itself.

As for the verb, the relative difference, well, it can be any relative difference whatsoever. We cannot create relative differences, grammar systems are the art of applying the limits, or boundaries upon things in order to make other things just like every other craftsman that has ever existed. Geometry is also an art of producing memory. So, in this respect, we call the relative difference, the verb, also a loci, which is the memory of the travels of our own hand. Any recorded relative difference, is then also called a loci. We do produce names for particular results as well, and we will mention them as needed. As all we can do is apply the correlative in reasoning, it means that every possible system of grammar is metaphorical. We can use grammar literally, that is for particular things, but grammar, by fact, is always metaphorical.

15, 16. A **circle** is a figure contained by one loci such that any line produced from the center of the circle, which is a point, to the loci are equal.



In the above, is the affirmation that what we produce with a compass is, in fact, the product of elementary binary recursion. In short, it is not as many feather-heads claim, prior to geometry, but a product of it, which means as a product, it can, in no wise, deny other products. Such claims have always been self-referential fallacies. In short, you can do all the math and every other grammar, using geometry. All you need to do is learn how. After all, it is a given, right in the definitions, that the whole of reality is a product of binary recursion, and binary recursion not only produces only binary recursion, but also can never contradict itself to create these self-referential fallacies.

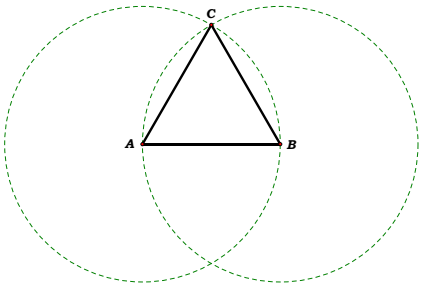
Our tools then, in geometry, are the potentials of the universe, to be abstracted by our very own hand, so that we can learn to be rational, and perform our job as a life support system.

Book 1 Proposition 1.

Given a line construct an equilateral triangle.

Definition: an equilateral triangle is that figure which has its three sides equal.

An equilateral triangle is then the application of loci as produced by a compass, using only our two given correlatives in order to construct a particular figure. The figure is important, for it is a visual paradigm of the Law of Identity in Geometry. It is the simplest composite figure which takes advantage of the unit. By way of construction, we are adding the compass to our given unit, or given thing.



Now, it is the simplest figure which uses the compass and straightedge, and thus what it represents, what it demonstrates, is often missed. However, down through the ages, it has been called the All-Seeing Eye of God, and an eye is put into it as a reminder, that this figure represents The Law of Identity, that is Truth. AB equals BC, BC equals AC. The Law of Identity is actually the recognition that grammar, rationality, our whole ability to think, depends upon the recursion of a given thing, the ability to reproduce intelligible things for our survival. The *Law of Identity*, is simply the expression of the recognition of a grammar basic, recursion. Binary Recursion, is then binary reproduction in truth.

As AB is to itself, so too is AB to BC, and as AB is to BC, so too is BC to AC. Etc.

One may notice that the figure demonstrates a common point, or common boundary. Given two sets of lines, all equal, and produced by the recursion of one of them then there are two pair of lines with a common endpoint. Or something to that effect. But, then, are they not all simply the same line to begin with? So, is all this jabbering about intersection, cutting, slicing and dicing, really outside of what has already been defined and given? Given two instances of memory, do we create a new memory? Is it possible to produce a new intelligible, just by the recursion of it? No.

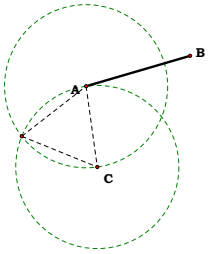
One may notice that the *Law of Identity* is not a so-called axiom, it is a grammatical given. Geometry is not *axiomatic*; it is the discovery, as Plato said, of reality as a life form. No form of life has to first go to school and learn some nit wit's dogma before being born.

Book 1 Proposition 2.

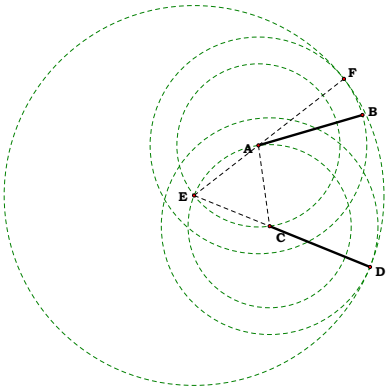
To place at a given point, a line equal to a given line.

Again, we are going to effect the recursion of our unit, but this time, we are going to effect recursion at a whole new location. I.e., use the Law of Identity, our given equilateral triangle, to make, again, our unit, but now, anywhere at all in the whole Universe.

Here is our given, and now we apply to it the Law of Identity.



Next, we are going to take another given, the ability to denote the recursion of any unit.



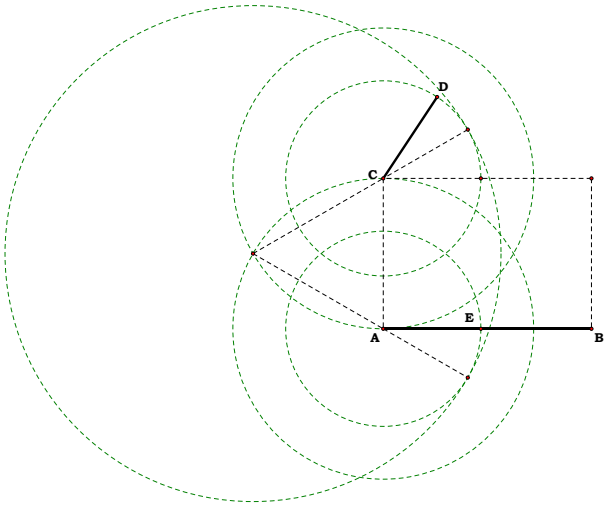
Now, we can list all the identities, which we have already learnt to explain the construction step by step. Nothing will be new, only explained step by step.

Spend some time doing just that.

Book 1 Proposition 3.

Given two unequal lines, to divide the greater making a segment of it *equal to the less.*

Again, there is nothing new, we are just going to learn something which can be done with it.



As before, describe each step.

What we have done, is, in three propositions, demonstrate the Law of Identity and how to apply it to effect all our grammatical operations. Every figure possible in geometry is going to be based on the application of the Law of Identity, and how from it, we develop, as Plato noted, the idea of greater than, less than, and all of our so-called mathematical operations which are factually common to all of our systems of grammar. The only thing given is what we factually are, that which is responsible for the intelligible of binary recursion in order to maintain and promote life.

In summing up, the straightedge allows us the ability to construct any particular unit, the compass the ability to effect the whole of grammatical operations with it, the pen and paper, the means of preserving the memory of any loci, or path for further use to go from any point to any point, used in the process. Third, there is no such thing as Euclidean Geometry, for, as demonstrated, all of our givens are derived from physical and biological fact. Euclid wrote on Geometry; he did not invent it.

Post-Partum Impression

Adam and Eve are a Conjugate Binary Pair, whereby Complete Induction and Deduction produces the human race. And it is a fact, binary recursion cannot produce anything but a binary result. Adam and Eve indicate metaphorical individuals and which can become a particular pairing of male and female, but as mind, we are responsible for the production of intelligible things by which we can produce other physical things.

We are the product of a living brain called Mind. This means that we have a well-defined biologically determined job to perform and well-defined physically determined means of doing our job. If you have not yet learnt this from your own experiences then do not despair, you are still alive and may yet learn it.